IN THE CLAIMS

Please cancel Claims 1-58 without prejudice.

Please add the following new Claims 59-251 as follows:

59. (New) A radioactive substance container comprising a thick bottomed container in which a bottom section and a body section are formed integrally by hot-dilating a metal billet in a container for forming.

60. (New) The radioactive substance container according to claim 59, wherein a section of the metal billet vertical to an axial direction is polygonal and a shape in a section of the container for forming vertical to an axial direction is circular.

61. (New) The radioactive substance container according to claim 59, wherein a section of the metal billet vertical to an axial direction is polygonal and a section of the container for forming vertical to an axial direction is polygonal.

62. (New) The radioactive substance container according to claim 59, wherein a boring punch used for hot dilation forming has a dimension and a shape which approach to the section of the basket for used nuclear fuel aggregate.

63. (New) The radioactive substance container according to claim 59, wherein an outer diameter of the bottomed container is not less than 1000 mm to not more than 3000 mm and its thickness is not less than 150 mm to not more than 300 mm.

64. (New) The radioactive substance container according to claim 59, wherein a spot facing section is further formed integrally with the bottom section at the time of forming the bottomed container.

65. (New) The radioactive substance container according to claim 59, wherein a flange is further provided integrally with the body section of the bottomed container.

66. (New) The radioactive substance container according to claim 59, wherein at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

67. (New) A radioactive substance container comprising a thick bottomed container in which when a metal billet is hot-dilated in a container for forming and its body section is worked, a boring uncompleted section remains on one end side of the body section so as to be a bottom section and the bottom section and the body section are formed integrally.

68. (New) The radioactive substance container according to claim 67, wherein a section of the metal billet vertical to an axial direction is polygonal and a shape in a section of the container for forming vertical to an axial direction is circular.

69. (New) The radioactive substance container according to claim 67, wherein a section of the metal billet vertical to an axial direction is polygonal and a section of the container for forming vertical to an axial direction is polygonal.

70. (New) The radioactive substance container according to claim 67, wherein a boring punch used for hot dilation forming has a dimension and a shape which approach to the section of the basket for used nuclear fuel aggregate.

71. (New) The radioactive substance container according to claim 67, wherein an outer diameter of the bottomed container is not less than 1000 mm to not more than 3000 mm and its thickness is not less than 150 mm to not more than 300 mm.

72. (New) The radioactive substance container according to claim 67, wherein a spot facing section is further formed integrally with the bottom section at the time of forming the bottomed container.

73. (New) The radioactive substance container according to claim 67, wherein a flange is further provided integrally with the body section of the bottomed container.

74. (New) The radioactive substance container according to claim 67, wherein at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

75. (New) A radioactive substance container comprising a bottomed container for storing a basket for used nuclear fuel aggregate in which a bottom section and a body section is integral by hot dilation forming in a container for forming.

76. (New) The radioactive substance container according to claim 75, wherein a boring punch used for hot dilation forming has a dimension and a shape which approach to the section of the basket for used nuclear fuel aggregate.

77. (New) The radioactive substance container according to claim 75, wherein a spot facing section is further formed integrally with the bottom section at the time of forming the bottomed container.

78. (New) The radioactive substance container according to claim 75, wherein a flange is further provided integrally with the body section of the bottomed container.

79. (New) The radioactive substance container according to claim 75, wherein at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

80. (New) A radioactive substance container comprising a bottomed container, in which a dosage equivalent factor of γ rays on an outer wall surface of a substantially center portion of a side surface of the body is not more than 200 μSv/h in the case where radioactive substance is contained in a bottomed container in which its bottom section and body section are formed integrally by hot dilation forming in a container for forming.

81. (New) The radioactive substance container according to claim 80, wherein a spot facing section is further formed integrally with the bottom section at the time of forming the bottomed container.

82. (New) The radioactive substance container according to claim 80, wherein a flange is further provided integrally with the body section of the bottomed container.

83. (New) The radioactive substance container according to claim 80, wherein at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

84. (New) A radioactive substance container comprising a bottomed container where a metal billet, in which at least a section vertical to an axial direction on a pressing forward side is formed into a polygonal shape, is set into a container for forming and a boring punch is pushed into the metal billet and the metal billet is hot-dilated so that a bottom section and a body section are formed integrally.

85. (New) The radioactive substance container according to claim 84, wherein a spot facing section is further formed integrally with the bottom section at the time of forming the bottomed container.

86. (New) The radioactive substance container according to claim 84, wherein a flange is further provided integrally with the body section of the bottomed container.

87. (New) The radioactive substance container according to claim 84, wherein at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

88. (New) A radioactive substance container comprising:

a bottomed container where a bottom section and a body section are formed integrally by hot press pressure and γ rays generated from radioactive substance such as used fuel is shielded;

a neutron shielding member which is provided around the bottomed container and shields neutron generated from the radioactive substance; and

a cover for covering an opening of the bottomed container.

89. (New) The radioactive substance container according to claim 88, wherein a spot facing section is further formed integrally with the bottom section at the time of forming the bottomed container.

90. (New) The radioactive substance container according to claim 88, wherein a flange is further provided integrally with the body section of the bottomed container.

91. (New) The radioactive substance container according to claim 88, wherein at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

92. (New) A radioactive substance container comprising:

a bottomed container which contains a radioactive substance such as used fuel into a body section with a bottom section and shields γ rays generated from the radioactive substance;

a neutron shielding material which is arranged around the bottomed container and shields neutron generated from the radioactive substance,

wherein a metal billet is heated and is upset and drawn so that the bottom section and the body section are formed integrally.

93. (New) The radioactive substance container according to claim 92, wherein a spot facing section is further formed integrally with the bottom section at the time of forming the bottomed container.

94. (New) The radioactive substance container according to claim 92, wherein a flange is further provided integrally with the body section of the bottomed container.

95. (New) The radioactive substance container according to claim 92, wherein at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

96. (New) A hot dilation forming-use metal billet, wherein at least a section vertical to an axial direction on a pressing forward side is formed into a polygonal shape.

97. (New) The billet according to claim 96, wherein a taper which becomes thinner towards the pressing direction is provided on the pressing forward side of the metal billet.

98. (New) The billet according to claim 96, wherein at least one or more stepped sections are provided so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

99. (New) A hot dilation forming-use metal billet, wherein at least one plane is provided on at least any one of a side surface on a pressing forward side and a side surface on a pressing backward side.

100. (New) The billet according to claim 99, wherein a taper which becomes thinner towards the pressing direction is provided on the pressing forward side of the metal billet.

101. (New) The billet according to claim 99, wherein at least one or more stepped sections are provided so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

102. (New) A hot dilation forming-use metal billet, wherein at least one plane is provided on a side surface and an extended section which engages with an end portion of an inlet of a container for forming is provided on an end portion on a pressing backward side.

103. (New) A hot dilation forming-use metal billet, wherein at least a section vertical to an axial direction on a pressing forward side is formed into a polygonal shape, and an extended section which engages with an end portion of an inlet of a container for forming is provided on a pressing backward side.

104. (New) A hot dilation forming-use metal billet, wherein at least a section vertical to an axial direction on a pressing forward side is formed into a polygonal shape, and at least one or more stepped sections are provided so that the pressing forward side becomes thinner gradationally towards a pressing direction, and an extended section which engages with an end portion of an inlet of a container for forming is provided on a pressing backward side.

105. (New) A hot dilation forming-use metal billet, wherein at least one plane is provided on at least any one of a side surface on a pressing forward side and a side surface on a pressing backward side, and at least one or more stepped sections are provided so that the pressing forward side becomes thinner gradationally towards the pressing direction, and an extended section which engages with an end portion of an inlet of a container for forming is provided on the pressing backward side.

106. (New) A container, wherein a metal billet is hot-dilated in a container for forming, and a bottom section and body section are formed integrally and a thick bottomed container is obtained.

107. (New) The container according to claim 106, wherein a section of the metal billet vertical to an axial direction is polygonal and an internal shape of a section of the container for forming vertical to the axial direction is circular.

108. (New) The container according to claim 106, wherein a section of the metal billet vertical to an axial direction is polygonal and an internal shape of a section of the container for forming vertical to the axial direction is polygonal.

109. (New) The container according to claim 106, wherein an outer diameter of the bottomed container is not less than 200 mm to not more than 4000 mm, and a thickness is not less than 20 mm to not more than 400 mm.

110. (New) The container according to claim 106, wherein the bottomed container is constituted so that at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

111. (New) A container, wherein when a metal billet is hot-dilated in a container for forming and a body section is worked, a boring uncompleted section is allowed to remain on one end side of the body section so as to be a bottom section, and an integrally thick bottomed container is obtained.

112. (New) The container according to claim 111, wherein a section of the metal billet vertical to an axial direction is polygonal and an internal shape of a section of the container for forming vertical to the axial direction is circular.

113. (New) The container according to claim 111, wherein a section of the metal billet vertical to an axial direction is polygonal and an internal shape of a section of the container for forming vertical to the axial direction is polygonal.

114. (New) The container according to claim 111, wherein an outer diameter of the bottomed container is not less than 200 mm to not more than 4000 mm, and a thickness is not less than 20 mm to not more than 400 mm.

115. (New) The container according to claim 111, wherein the bottomed container is constituted so that at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

116. (New) A container, wherein a metal billet, where at least a section vertical to an axial direction on a pressing forward side is polygonal, is set into a container for forming, and a boring punch is pushed into the metal billet and the metal billet is hot-dilated to be formed into a bottomed container where a bottom section and a body section are integral.

117. (New) The container according to claim 116, wherein the bottomed container is constituted so that at least any one of an external section and an internal section of the bottomed container vertical to the axial direction is polygonal.

118. (New) A bottomed container manufacturing apparatus comprising:

a container for forming having at least a container body section and a container bottom section in which the container body section and the container bottom section can move relatively with respect to an axial direction of the container body section; and

a boring punch which is mounted to a pressing machine and pressurizes a metal billet for hot dilation forming set into the container for forming.

119. (New) A bottomed container manufacturing apparatus comprising:

a container for forming having at least container body sections and container bottom sections divided in an axial direction in which the container body section and the container bottom section can move relatively with respect to an axial direction of the container body section; and

a boring punch which is mounted to a pressing machine and pressurizes a metal billet for hot dilation forming set into the container for forming.

120. (New) A radioactive substance container manufacturing method comprising:

the step of rounding a drum-shaped bottomed container where a bottom section and a body section are formed integrally by hot dilation and setting a tool so as to cut an external side of the bottomed container; and

the step of cutting an internal section of the bottomed container into a shape according to at least one portion of an outer peripheral shape of a basket for containing used nuclear fuel aggregate.

121. (New) A radioactive substance container manufacturing method comprising:

the step of hot-dilating a bottomed container so that its bottom section and body section are integral; and

the step of cutting an internal section of the bottomed container into a shape according to at least one portion of an outer peripheral shape of a basket for containing used nuclear fuel aggregate.

122. (New) A container manufacturing method comprising:

the step of setting a metal billet having at least one plane on a side surface into a container for forming with a gap from an inner wall; and

the step of pushing a boring punch into the metal billet and bending the plane towards the inner wall so as to hot-dilate the metal billet.

123. (New) The method of manufacturing a container according to claim 122, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

124. (New) The method of manufacturing a container according to claim 123, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

125. (New) The method of manufacturing a container according to claim 123, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

126. (New) The method of manufacturing a container according to claim 122, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

127. (New) The method of manufacturing a container according to claim 122, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

128. (New) The method of manufacturing a container according to claim 122, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

129. (New) The method of manufacturing a container according to claim 128, wherein the body section of the container for forming is divided in an axial direction.

130. (New) A container manufacturing method comprising:

the step of setting a metal billet, which has at least one plane on a side surface and an extended section engaging with an end portion of an inlet of a container for forming on an end portion of a pressing backward side, into the container for forming with a gap from an inner wall; and

the step of pushing a boring punch into the metal billet and bending the plane towards the inner wall so as to hot-dilate the metal billet.

131. (New) The method of manufacturing a container according to claim 130, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

132. (New) The method of manufacturing a container according to claim 131, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

133. (New) The method of manufacturing a container according to claim 131, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

134. (New) The method of manufacturing a container according to claim 130, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

135. (New) The method of manufacturing a container according to claim 130, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

136. (New) The method of manufacturing a container according to claim 130, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

137. (New) The method of manufacturing a container according to claim 136, wherein the body section of the container for forming is divided in an axial direction.

138. (New) A container manufacturing method comprising:

the step of setting a metal billet, where at least a section vertical to an axial direction on a pressing forward side is formed into a polygonal shape, into a container for forming; and

the step of pushing a boring punch into the metal billet and hot-dilating the metal billet.

139. (New) The method of manufacturing a container according to claim 138, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

140. (New) The method of manufacturing a container according to claim 139, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

141. (New) The method of manufacturing a container according to claim 139, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

142. (New) The method of manufacturing a container according to claim 138, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

143. (New) The method of manufacturing a container according to claim 138, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

144. (New) The method of manufacturing a container according to claim 138, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

145. (New) The method of manufacturing a container according to claim 144, wherein the body section of the container for forming is divided in an axial direction.

146. (New) A container manufacturing method, wherein a metal billet having at least one plane on at least any one of a side surface on a pressing forward side and a side

on a pressing backward side is set into a container for forming, and a boring punch is pushed into the metal billet and the metal billet is hot-dilated.

147. (New) The method of manufacturing a container according to claim 146, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

148. (New) The method of manufacturing a container according to claim 147, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

149. (New) The method of manufacturing a container according to claim 147, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

150. (New) The method of manufacturing a container according to claim 146, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

151. (New) The method of manufacturing a container according to claim 146, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

152. (New) The method of manufacturing a container according to claim 146, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

153. (New) The method of manufacturing a container according to claim 152, wherein the body section of the container for forming is divided in an axial direction.

154. (New) A hot pressing method, of manufacturing a thick metal-made drum or a cylindrical container having an excellent shape of an end surface, wherein a metal billet having different diameter sections without joint, where its pressing forward side is composed of a member having a section with an outer diameter smaller than an inner diameter of a container or an outer diameter of a diagonal length or a member having a section with an outer diameter of a diagonal length equal with the inner diameter of the container and its backward side is composed of a member having a section with an outer diameter or a diagonal length equal with the inner diameter of the container, is set into the container for press forming which was heated to a press working temperature, and while a center of a

workpiece of the metal billet without joint is being bored by a punch, the metal billet is press-worked.

155. (New) The method of manufacturing a container according to claim 154, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

156. (New) The method of manufacturing a container according to claim 155, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

157. (New) The method of manufacturing a container according to claim 155, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

158. (New) The method of manufacturing a container according to claim 154, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

159. (New) The method of manufacturing a container according to claim 154, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

160. (New) The method of manufacturing a container according to claim 154, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

161. (New) The method of manufacturing a container according to claim 160, wherein the body section of the container for forming is divided in an axial direction.

162. (New) A method of manufacturing a drum or a container of setting a metal billet into a container for forming and hot-dilating the metal billet by means of a boring punch to be operated by a pressing machine comprising:

the step of setting the metal billet, where its pressing forward side has a section having an outer diameter with a diagonal length of not more than an inner diameter of the container and its backward side has a section having an outer diameter substantially equal with the inner diameter of the container, into a container for press forming which was heated to a press working temperature; and

the step of boring a center of a workpiece of the metal billet by means of the boring punch and simultaneously press-working the metal billet.

163. (New) The method of manufacturing a container according to claim 162, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

164. (New) The method of manufacturing a container according to claim 163, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

165. (New) The method of manufacturing a container according to claim 163, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

166. (New) The method of manufacturing a container according to claim 162, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

167. (New) The method of manufacturing a container according to claim 162, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

168. (New) The method of manufacturing a container according to claim 162, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

169. (New) The method of manufacturing a container according to claim 168, wherein the body section of the container for forming is divided in an axial direction.

170. (New) A method of manufacturing a drum or a container of setting a metal billet into a container for forming and hot-dilating the metal billet by means of a boring punch to be operated by a pressing machine, the method comprising:

the step of setting the metal billet, where its pressing forward side has a section having an outer diameter with a diagonal length of smaller than an inner diameter of the container and its backward side has a section having a diagonal length substantially equal with the inner diameter of the container, into a container for press forming which was heated to a press working temperature; and

the step of boring a center of a workpiece of the metal billet by means of the punch and simultaneously press-working the metal billet.

171. (New) The method of manufacturing a container according to claim 170, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

172. (New) The method of manufacturing a container according to claim 171, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

173. (New) The method of manufacturing a container according to claim 171, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

174. (New) The method of manufacturing a container according to claim 170, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

175. (New) The method of manufacturing a container according to claim 170, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

176. (New) The method of manufacturing a container according to claim 170, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

177. (New) The method of manufacturing a container according to claim 176, wherein the body section of the container for forming is divided in an axial direction.

178. (New) A method of manufacturing a drum or a container of setting a metal billet into a container for forming and hot-dilating the metal billet by means of a boring punch to be operated by a pressing machine, the method comprising:

the step of setting the metal billet, where its pressing forward side has a section with an outer diameter smaller than an inner diameter of the container and its backward side has a section with an outer diameter substantially equal with the inner diameter of the container, into a container for press forming which was heated to a press working temperature; and

the step of boring a center of a workpiece of the metal billet by means of the punch and simultaneously press-working the metal billet.

179. (New) The method of manufacturing a container according to claim 178, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

180. (New) The method of manufacturing a container according to claim 179, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

181. (New) The method of manufacturing a container according to claim 179, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

182. (New) The method of manufacturing a container according to claim 178, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

183. (New) The method of manufacturing a container according to claim 178, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

184. (New) The method of manufacturing a container according to claim 178, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

185. (New) The method of manufacturing a container according to claim 184, wherein the body section of the container for forming is divided in an axial direction.

186. (New) A method of manufacturing a container, comprising:

the step of setting a metal billet having at least one plane on a side surface into a container for forming with a gap from an inner wall;

the step of pushing the metal billet so as to extend a pressing backward side of the metal billet to an end portion of an inlet of the container for forming; and

the step of pushing a boring punch into the metal billet and bending the plane towards the inner wall so as to hot-dilate the metal billet.

187. (New) The method of manufacturing a container according to claim 186, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

188. (New) The method of manufacturing a container according to claim 187, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

189. (New) The method of manufacturing a container according to claim 187, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

190. (New) The method of manufacturing a container according to claim 186, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

191. (New) The method of manufacturing a container according to claim 186, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

192. (New) The method of manufacturing a container according to claim 186, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

193. (New) The method of manufacturing a container according to claim 192, wherein the body section of the container for forming is divided in an axial direction.

194. (New) A method of manufacturing a container, comprising:

the step of setting a metal billet, where at least one plane is provided on a side surface and an extended section engaging with an end portion of an inlet of a container for forming is provided on a pressing backward side, into a container for forming with a gap from an inner wall; and

the step of pushing a boring punch into the metal billet and bending the plane towards the inner wall so as to hot-dilate the metal billet.

195. (New) The method of manufacturing a container according to claim 194, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

196. (New) The method of manufacturing a container according to claim 195, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

197. (New) The method of manufacturing a container according to claim 195, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

198. (New) The method of manufacturing a container according to claim 194, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

199. (New) The method of manufacturing a container according to claim 194, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

200. (New) The method of manufacturing a container according to claim 194, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

201. (New) The method of manufacturing a container according to claim 200, wherein the body section of the container for forming is divided in an axial direction.

202. (New) A method of manufacturing a container, comprising:

the step of setting a metal billet, where at least a section vertical to an axial direction on a pressing forward side is formed into a polygonal shape, into a container for forming;

the step of pushing the metal billet so as to extend a pressing backward side of the metal billet to an end portion of an inlet of the container for forming; and

the step of pushing a boring punch into the metal billet so as to hot-dilate the metal billet.

203. (New) The method of manufacturing a container according to claim 202, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

204. (New) The method of manufacturing a container according to claim 203, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

205. (New) The method of manufacturing a container according to claim 203, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

206. (New) The method of manufacturing a container according to claim 202, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

207. (New) The method of manufacturing a container according to claim 202, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

208. (New) The method of manufacturing a container according to claim 202, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

209. (New) The method of manufacturing a container according to claim 208, wherein the body section of the container for forming is divided in an axial direction.

210. (New) A method of manufacturing a container, comprising:

the step of setting a metal billet, where at least one plane is provided on at least any one of a side surface of a pressing forward side and a side surface of a pressing backward side, into a container for forming;

the step of pushing the metal billet so as to extend a pressing backward side of the metal billet to an end portion of an inlet of the container for forming; and

the step of pushing a boring punch into the metal billet so as to hot-dilate the metal billet.

211. (New) The method of manufacturing a container according to claim 210, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

212. (New) The method of manufacturing a container according to claim 211, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

213. (New) The method of manufacturing a container according to claim 211, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

214. (New) The method of manufacturing a container according to claim 210, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

215. (New) The method of manufacturing a container according to claim 210, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

216. (New) The method of manufacturing a container according to claim 210, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

217. (New) The method of manufacturing a container according to claim 216, wherein the body section of the container for forming is divided in an axial direction.

218. (New) A method of hot pressing a thick metal-made cylinder or a cylindrical container having an excellent shape of an end surface, wherein a metal billet having different diameter sections without joint, where its pressing forward side is composed of a member having a section with an outer diameter smaller than an inner diameter of a container or an outer diameter of a diagonal length or a member having a section with an outer diameter of a diagonal length equal with the inner diameter of the container and its backward side is composed of a member having a section with an outer diameter or a diagonal length equal with the inner diameter of the container, is set into the container for press forming which was heated to a press working temperature, and the metal billet is pushed so that the pressing backward side of the metal billet is extended to an end portion of an inlet of the container for

forming, and while a center of a workpiece of the metal billet without joint is being bored by a punch, the metal billet is press-worked.

219. (New) The method of manufacturing a container according to claim 218, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

220. (New) The method of manufacturing a container according to claim 219, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

221. (New) The method of manufacturing a container according to claim 219, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

222. (New) The method of manufacturing a container according to claim 218, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

223. (New) The method of manufacturing a container according to claim 218, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

224. (New) The method of manufacturing a container according to claim 218, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

225. (New) The method of manufacturing a container according to claim 224, wherein the body section of the container for forming is divided in an axial direction.

226. (New) A method of manufacturing a drum or a container of setting a metal billet into a container for forming and hot-dilating the metal billet by means of a boring punch to be operated by a pressing machine, the method comprising:

the step of setting the metal billet, where its pressing forward side has a section having an outer diameter with a diagonal length of not more than an inner diameter of the container and its backward side has a section having an outer diameter substantially equal with the inner diameter of the container, into a container for press forming which was heated to a press working temperature;

the step of pushing the metal billet so as to extend the pressing backward side of the metal billet to an end portion of an inlet of the container for forming; and

the step of boring a center of a workpiece of the metal billet by means of the boring punch and simultaneously press-working the metal billet.

227. (New) The method of manufacturing a container according to claim 226, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

228. (New) The method of manufacturing a container according to claim 227, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

229. (New) The method of manufacturing a container according to claim 227, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

230. (New) The method of manufacturing a container according to claim 226, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

231. (New) The method of manufacturing a container according to claim 226, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

232. (New) The method of manufacturing a container according to claim 226, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

233. (New) The method of manufacturing a container according to claim 232, wherein the body section of the container for forming is divided in an axial direction.

234. (New) A method of manufacturing a drum or a container of setting a metal billet into a container for forming and hot-dilating the metal billet by means of a boring punch to be operated by a pressing machine, the method comprising:

the step of setting the metal billet, where its pressing forward side has a section having an outer diameter with a diagonal length of smaller than an inner diameter of the container and its backward side has a section having a diagonal length substantially equal with the inner diameter of the container, into a container for press forming which was heated to a press working temperature;

the step of pushing the metal billet so as to extend the pressing backward side of the metal billet to an end portion of an inlet of the container for forming; and

the step of boring a center of a workpiece of the metal billet by means of the punch and simultaneously press-working the metal billet.

235. (New) The method of manufacturing a container according to claim 234, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

236. (New) The method of manufacturing a container according to claim 235, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

237. (New) The method of manufacturing a container according to claim 235, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

238. (New) The method of manufacturing a container according to claim 234, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

239. (New) The method of manufacturing a container according to claim 234, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

240. (New) The method of manufacturing a container according to claim 234, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

241. (New) The method of manufacturing a container according to claim 240, wherein the body section of the container for forming is divided in an axial direction.

242. (New) A method of manufacturing a drum or a container of setting a metal billet into a container for forming and hot-dilating the metal billet by means of a boring punch to be operated by a pressing machine, the method comprising:

the step of setting the metal billet, where its pressing forward side has a section with an outer diameter smaller than an inner diameter of the container and its backward side has a section with an outer diameter substantially equal with the inner diameter of the container, into a container for press forming which was heated to a press working temperature;

the step of pushing the metal billet so as to extend the pressing backward side of the metal billet to an end portion of an inlet of the container for forming; and

the step of boring a center of a workpiece of the metal billet by means of the punch and simultaneously press-working the metal billet.

243. (New) The method of manufacturing a container according to claim 242, further comprising the step of forming the metal billet by means of a forging step and forming at least the pressing forward side of the metal billet into an angular section.

244. (New) The method of manufacturing a container according to claim 243, wherein the forging step includes the step of providing a taper which becomes thinner towards the pressing direction on the pressing forward side of the metal billet.

245. (New) The method of manufacturing a container according to claim 243, wherein the forging step includes the step of providing at least one stepped section so that the pressing forward side of the metal billet becomes thinner gradationally towards the pressing direction.

246. (New) The method of manufacturing a container according to claim 242, further comprising:

the step of providing a drum-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral;

the step of removing the drum-shaped member from the bottom section of the bottomed container after the forming; and

the step of removing a pillar-shaped portion formed on the bottom section of the bottomed container by means of the drum-shaped member.

247. (New) The method of manufacturing a container according to claim 242, further comprising:

the step of providing a pillar-shaped member between the metal billet and the bottom of the container for forming and setting the metal billet into the container for forming;

the step of pushing the boring punch into the metal billet and hot-dilating the metal billet so as to form the bottomed container where the bottom section and the body section are integral; and

the step of removing the pillar-shaped member from the bottom section of the bottomed container after the forming.

248. (New) The method of manufacturing a container according to claim 242, wherein the body section of the container for forming can move relatively with respect to the bottom section of the container for forming.

249. (New) The method of manufacturing a container according to claim 248, wherein the body section of the container for forming is divided in an axial direction.

250. (New) A method of manufacturing a container comprising:

the upsetting step of placing a pressurizing platform into a ring-shaped die formed with an opening at its inner end portion and putting a metal billet into a mold composed of the die and the pressurizing platform so as to pressurize the metal billet by means of a boring punch; and

the metal billet drawing step of supporting the die by means of a drum-shaped spacer and pushing the metal billet by means of the boring punch.

251. (New) A method of manufacturing a container comprising:

the upsetting preparation step of stacking a plurality of ring-shaped dies formed with an opening on its inner end portion and stacking a plurality of pressurizing platforms

respectively in the dies and putting a metal billet into a mold composed of the die and the pressurizing platform;

the upsetting step of pressurizing the metal billet from above the mold using a boring punch to be operated by a pressing machine;

the receding step of allowing the boring punch and the whole metal billet including and the upper die to recede;

the drawing preparation step of removing the used pressurizing platform and placing a drum-shaped spacer onto the next die and placing the receded whole metal billet including the die onto the spacer;

the drawing step of pushing the metal billet by means of the boring punch and drawing the metal billet by means of the die; and

the repeating step of repeating the above-mentioned steps on the next pressurizing platform and die using a spacer of a length according to deformation of the metal billet.